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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,562	04/02/2002	Benjamin P Milner	36-1528	3284
23117	7590	03/16/2005	EXAMINER	
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			MCFADDEN, SUSAN IRIS	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/089,562	<b>Applicant(s)</b> MILNER, BENJAMIN P	
	<b>Examiner</b> Susan McFadden	<b>Art Unit</b> 2655	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/17746 in view of Callens et al. (4907277).

In regard to claims 1,5,9, and 10, WO 95/17746 discloses a distributed speech recognition system, data carrier, and method whereby a remote speech recognizer is accessed across a transmission network (see p. 1, par. 1; and p. 6, par. 2, fig. 2). Furthermore, it is known that transmission errors may occur within the transmission network (see p. 10, 1. 19- 28). A skilled person would realize that, due to transmission errors, a packet of a received digital signal would occasionally fail to be received or contain errors. To solve the technical problem, the skilled person would consult the relevant prior art. Callens et al. show a method of reconstructing lost data in a digital voice transmission system. Callens et al. disclose a method for correcting errors due to bits lost in transmission between a transmitter and a receiver; a scheme is disclosed for interpolating or extrapolating bits that were normally received (see col. 1, 1. 11-14), as a

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result, lost samples of a residual baseband signal, an energy component, and/or PARCOR coefficients constituting a speech signal can be reconstructed (see col. 6, 1. 16-20). In detail, Callens et al. disclose a method comprising the steps of - receiving a sequence of transmitted feature vectors, said feature vectors representing a speech signal (see col. 4, 1. 3-8, PARCOR coefficients are an example for feature vectors); - detecting the absence of a feature vector in the received sequence (see col. 11, 1. 3-8); - generating an estimated replacement feature vector for the detected absent feature vector (see col. 7, 1. 38- col. 9, 1. 61), and - inserting said replacement feature vector into the received feature vector sequence to provide a modified feature vector sequence and performing speech recognition upon the modified feature vector sequence (see col. 11, 1. 38-47). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add this feature because it makes the system more reliable.

In regard to claims 2,3,6, and 7, W0 95/17746 discloses a device and method whereby a generating step comprises estimating a component of the replacement feature vector (see col. 8, 1. 46- col. 9, 1. 19). Moreover, W0 95/17746 discloses a controller that permanently retains blocks of samples last received. Therefore, the estimating step uses an interpolation coefficient that is updated in response to one or more received feature vectors (see col. 7, 1. 65-68).

In regard to claims 4 and 8, W0 95/17746 and Callens et al. discloses the device and method discussed above. They do not specifically show that feature vector in the spectral domain can be converted to the Cepstral domain. The Examiner takes Official Notice that one of ordinary art of speech recognition knows how to convert vectors in a


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spectral domain to a Cepstral domain. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add this feature because it makes the system more flexible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan McFadden whose telephone number is 571-272-7621. The examiner can normally be reached on Monday-Friday, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Susan McFadden  
Primary Examiner  
Art Unit 2655

March 9, 2005